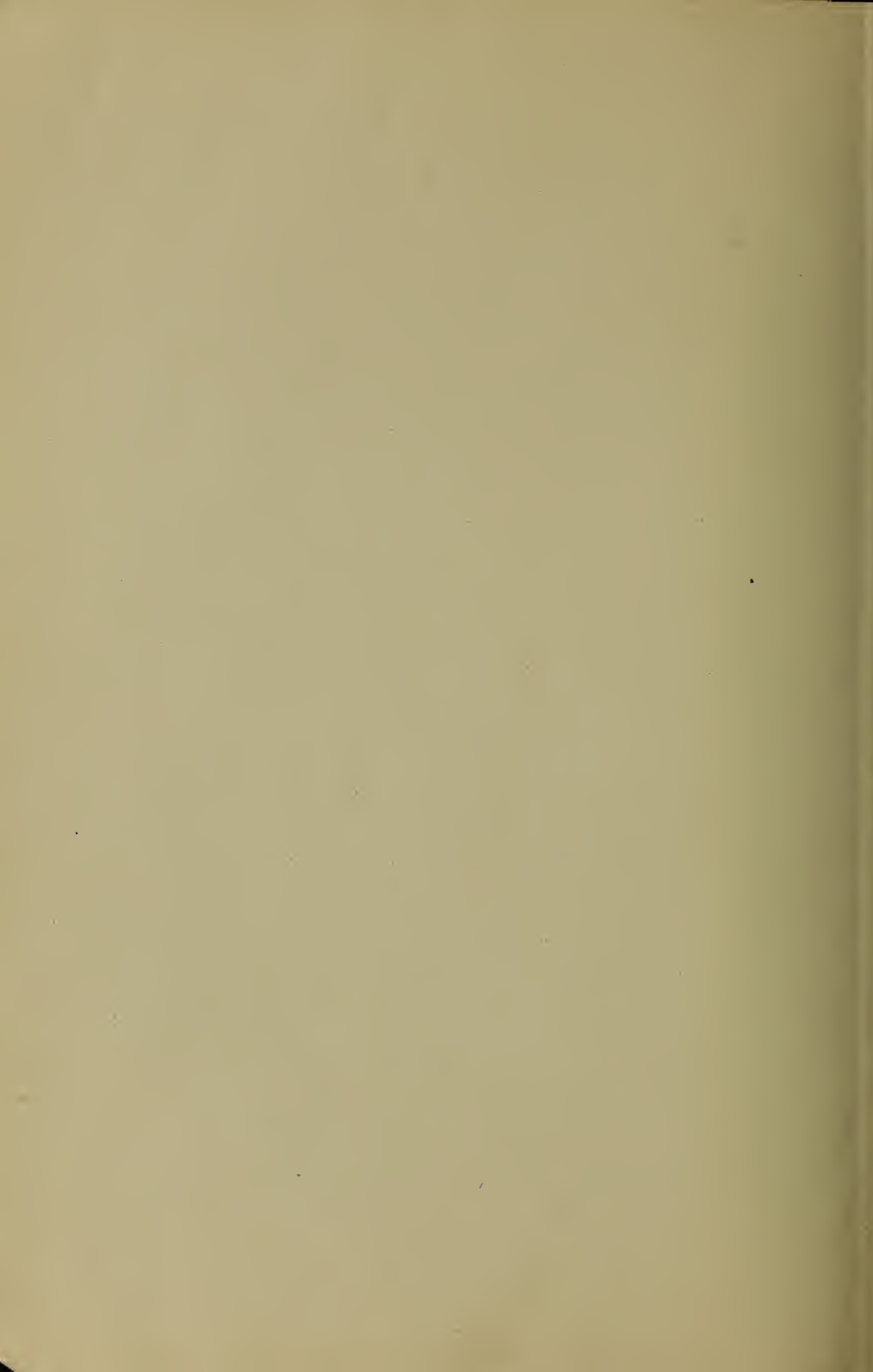


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A COURSE
IN TINTING





A COURSE IN TINTING.

Prepared for Schools and Colleges where only a few Plates
are introduced into the regular Drawing Course,

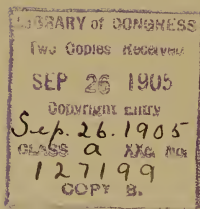
— BY —

W. D. BROWNING, M. E.,
Editor of "The Draftsman."

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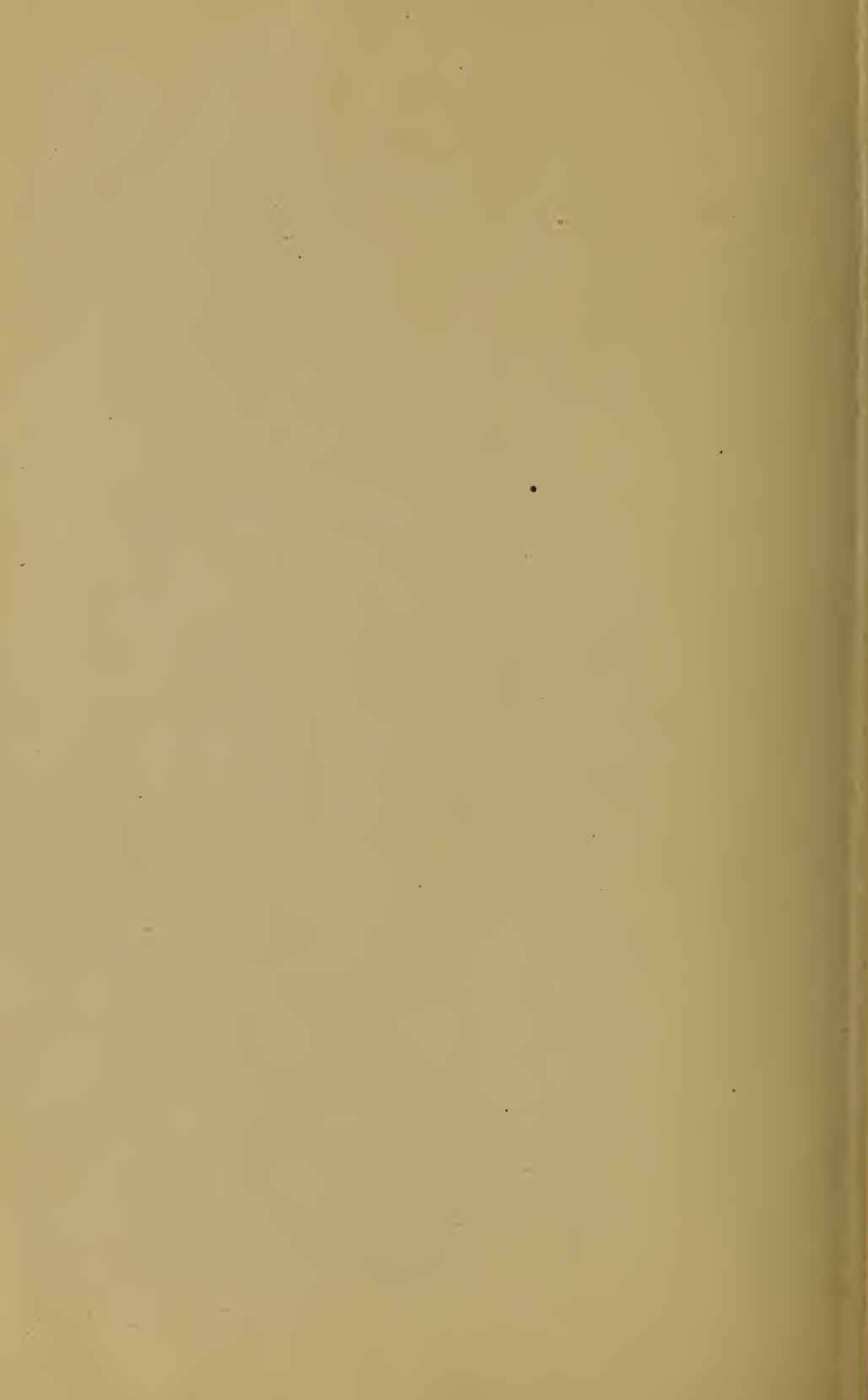
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PRINTERS

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PREFACE.

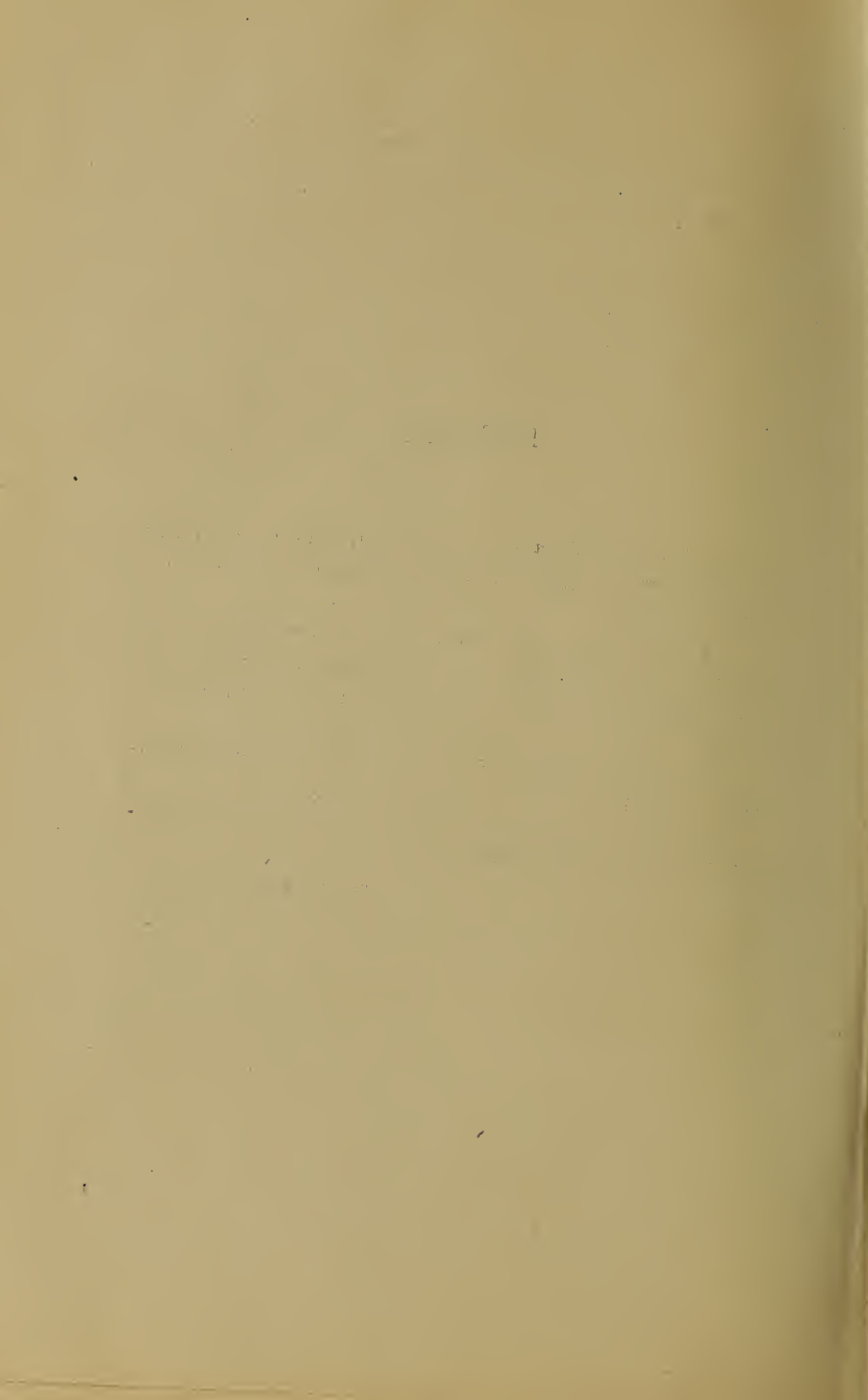
It is the aim of the author to present the outlines of at least five plates, with suggestions for the finishing in color, for a course in tinting.

A number of the technical schools have introduced a small amount of this work in their drawing courses, and it is the hope of the author that this work will aid the student and the instructor, too.

The color plates are placed near each other to facilitate printing and binding.

The author is indebted to Mr. A. H. Bowlzer, Jr., for assistance in making up the illustrations.

W. D. BROWNING.



A COURSE IN TINTING.

MATERIALS TO BE USED.

For this class of work the following materials will be needed:

A set of water colors, a nest of cabinet saucers, a camel's hair brush, a bottle of mucilage and brush, and a small glass for water.

Water Colors.—Any good set such as Winsor and Newton's water colors in "half pans," Fig. 1, are recommended. They should contain the following colors: Burnt Sienna, Raw Sienna, Crimson Lake, Gamboge, Burnt Umber, Indian Red and Prussian Blue,

Saucers.—The "nest" should contain six medium-sized saucers, Fig. 2, or one dish having several

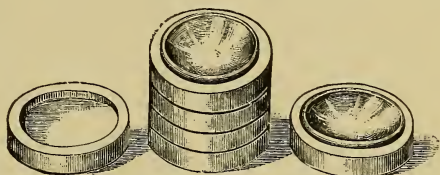


Fig. 2.

pockets or cellars, Fig. 3.

The camel hair brush should be double ended, and should be of medium size, one end about $\frac{1}{4}$ inch diameter, and the other $\frac{3}{8}$ inch.

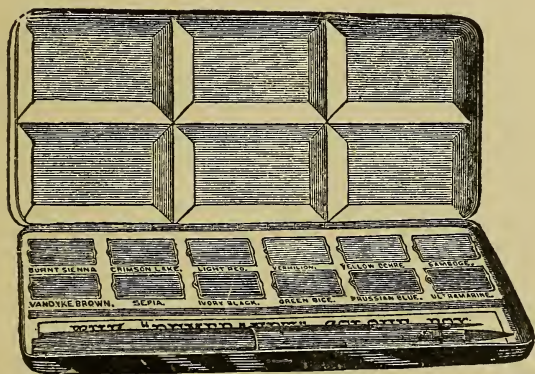


Fig. 1.

If the bottled ink has been used for the previous work, a stick of Indian ink will also need to be purchased. All the conventional colors used to represent the different materials may be mixed from the simple ones given in this list.

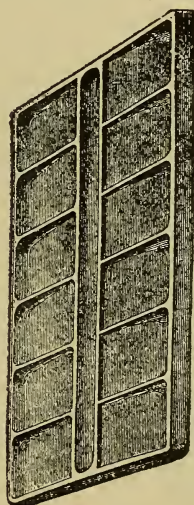


Fig. 3.

Mucilage.—The mucilage needs to be very thick, as it is used in shrinking down the heavy drawing paper. The ordinary mucilage in

bottles is not fit for this use, and it is recommended that each person buy the Gum Arabic, and dissolve it in a bottle of water, using it as thick as it will run.

Water Glass.—This glass is for holding clean water with which the colors are mixed. Any small vessel will answer this purpose, but a small-sized tumbler is the most convenient.

In addition to these the student may provide himself with a slate ink slab, as shown in Fig. 4.

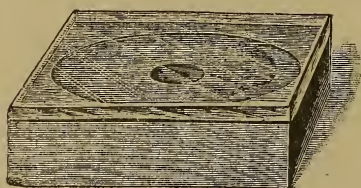


Fig. 4.



The stick ink, Fig. 5, is used for all black work, it being prepared by grinding the end around in a little water in the slate slab. The glass cover prevents the evaporation of the water. Ink may be ground in a saucer of the set in Fig. 3.

Fig. 5.

DIRECTIONS FOR SHRINKING DOWN PAPER.

The white paper known as John Whatman, hot pressed, size 15 x 20,

is recommended for this work and the side of the paper showing the name right side up is the one on which to do the tinting.

Whenever a drawing is to be tinted, it must be shrunk down in order that it may not wrinkle after tinting. To shrink down the paper, proceed as follows: Lay the edge of the tee square parallel to an edge of the paper and about $\frac{3}{8}$ inch from it, and turn up the paper at right angles, running along the sharp edge of the tee square with the thumb nail or knife blade. Turn up all the edges in this way so that the paper will resemble a shallow paper box. The corners need not be cut, though many draftsmen cut out a V-shaped notch from each corner to save trouble in folding, but must be doubled over so that all the edges of the paper will stand nearly perpendicular. After this is done the paper should be turned over so as to rest on the upturned edges, and dampened very slightly with a sponge on the back. Every part of the paper must be dampened except the upturned edges, which must be kept dry in order that the mucilage may stick. No water should be left standing on the sheet when it is turned over.

The paper should next be turned back and placed so that two edges at the right angles may correspond, when turned down, to two edges of the drawing board. The mucilage should next be applied to the dry edges as rapidly as possible. The

two edges that correspond to the edges of the drawing board should first be turned down, great care being taken to leave no wrinkles in these edges nor in the corner between them. The other edges should then be turned down, the same care being taken to leave no wrinkles in these edges or in the

paper should be allowed to dry slowly. Paper should never be dried in the sun or in artificial heat, as it will get too dry and afterwards become loose when exposed to ordinary temperature.

Considerable practice may be necessary before the paper can be shrunk down successfully, but if

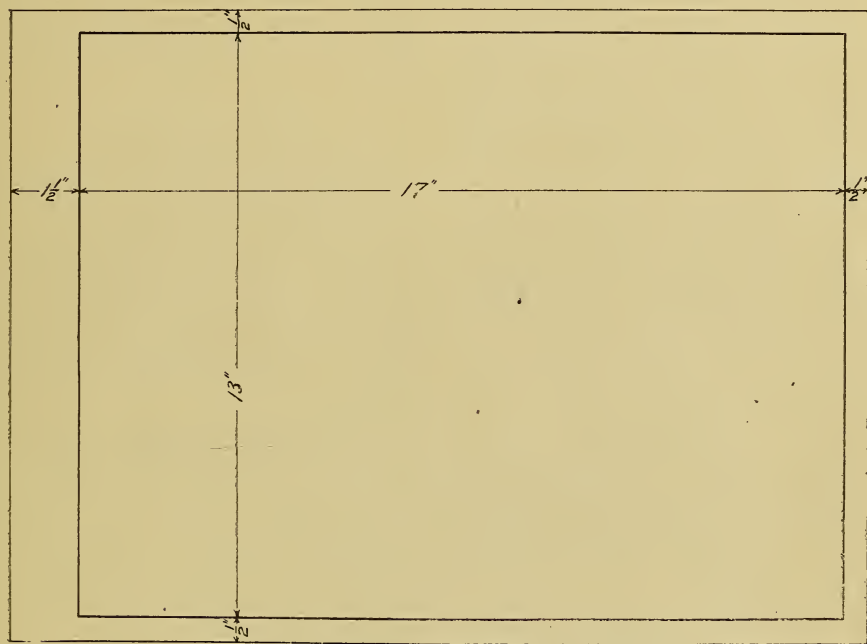


Fig 5.--OUTLINE OF BORDERS ON PLATES.

corner. The edges must be kept straight, and, if there are no wrinkles left in the edges, the paper will come down smooth when dry, no matter how much wrinkled while wet. The natural shrinkage of the paper is sufficient without stretching. The edges should be pressed down smooth with the back of a knife or the thumb nail, and the

the directions above are followed closely, there need be no difficulty. The paper must be dampened evenly, and the mucilage must be put on evenly and abundantly. Great care must be taken not to drop any mucilage on the middle of the drawing board, and not to get any beyond the dry edge of the paper. Otherwise the paper may be stuck

down so as to make trouble in cutting the plate off when finished.

After the paper is dry, lay out the borders as shown in Fig. 5, which is for a sheet 14 x 19 when finished.

It may be necessary, in order to conform to the size of sheet used in the school where the student is at work, to make the border 12 x 16, or some other dimensions.

If this is true, the dimensions given on Plates I and II for the distance from border line to object will have to be changed to suit conditions.

For instance on Plate I the distance from the border to the object may change to 1 inch instead of $1\frac{1}{2}$ inch.

PLATE I.

The following illustration will give an idea of the arrangement of seven rectangles from the border line on Plate I.

Ink in all outlines heavy and do not fail to erase all lead pencil marks.

The dimensions and other figures are only to aid in locating the rectangles and *should not* be placed on the drawing.

It has been suggested that after inking in the figures, the plate should be washed over with clean water to take out any surplus ink and to leave the paper in better condition for the water shades. The

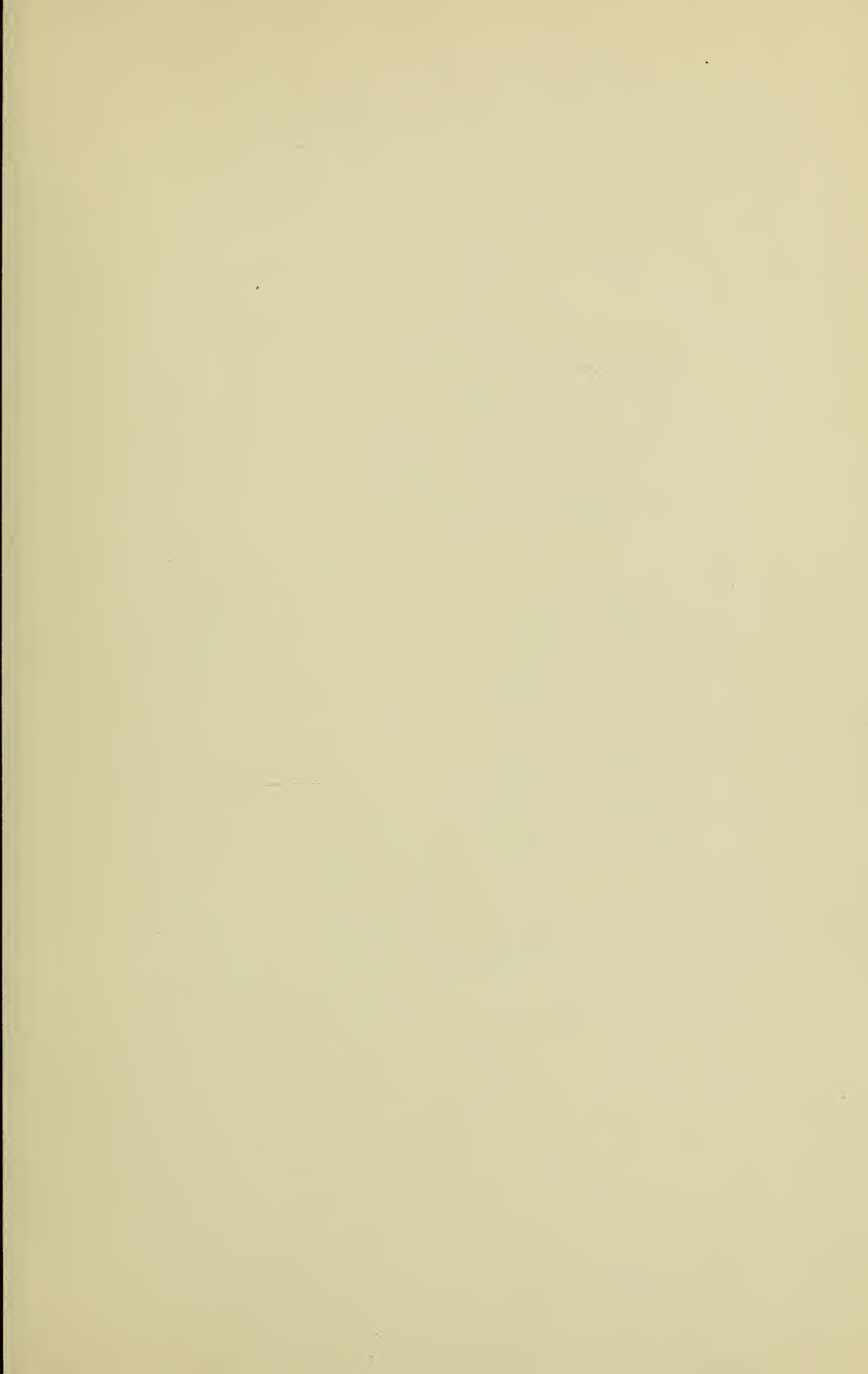
paper should be sopped very lightly with a sponge and a large quantity of water should be used. After washing the paper, allow it to dry slowly. If the paper is dried in the sun it will get so warm that the shades will dry too rapidly. When the paper is down smooth and dry, it should be placed on the drawing table slightly inclined in one direction in order that the ink or water color may always flow in one direction.

TO PREPARE THE WASH.

Take a saucer half full of clean water and by rubbing the end of a stick of ink mix enough India ink to make a shade no darker than in No. 1, Plate I. A small piece of paper should be kept to try the shades on before putting them on the plate.

Mix the ink thoroughly with one end of the brush before applying to the paper. One end of the brush should always be used in the ink or tint, while the other end is kept clean for blending, if a double brush is used.

With considerable ink in the brush but not nearly all it will hold, commence at the top line of No. 1 and follow it carefully with the first stroke. Before the ink dries at the top, lay on the ink below by moving the brush back and forth, using enough ink in the brush, working toward the bottom. The lines must be followed carefully at first, and the brush should not be used twice over the same place.



COURSE IN TINTING

PLATE I

CENTRAL INSTITUTE ALBONILZER JR

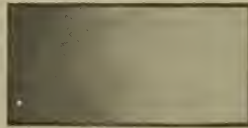
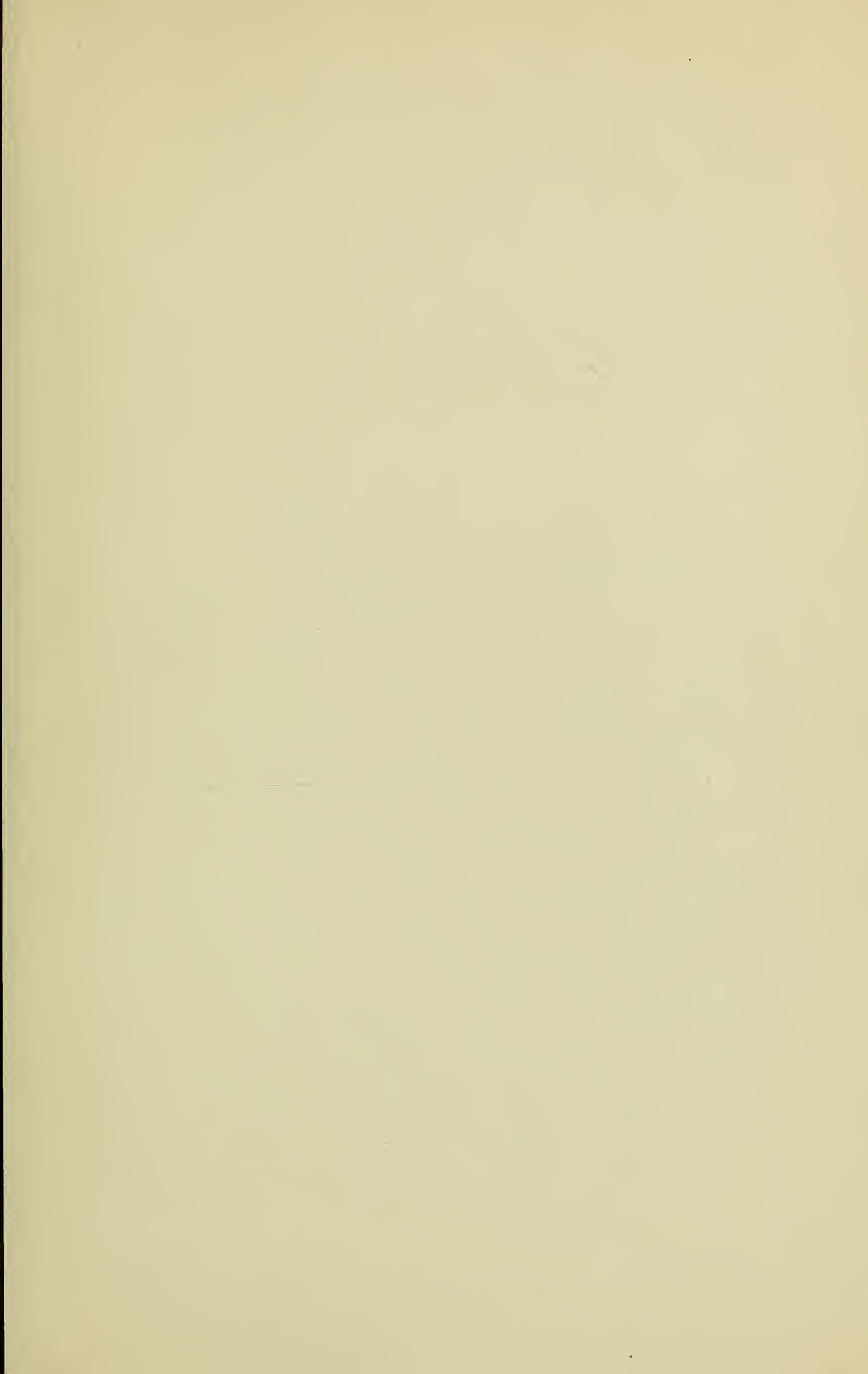
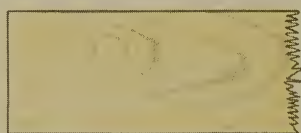
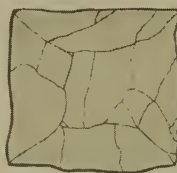


PLATE I FINISHED.

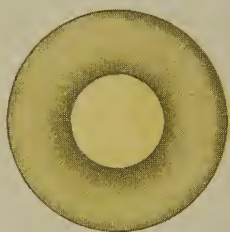




Wood



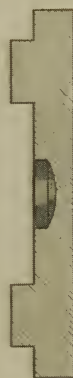
Stone



Brass



Copper



Cast Iron



Wrought Iron

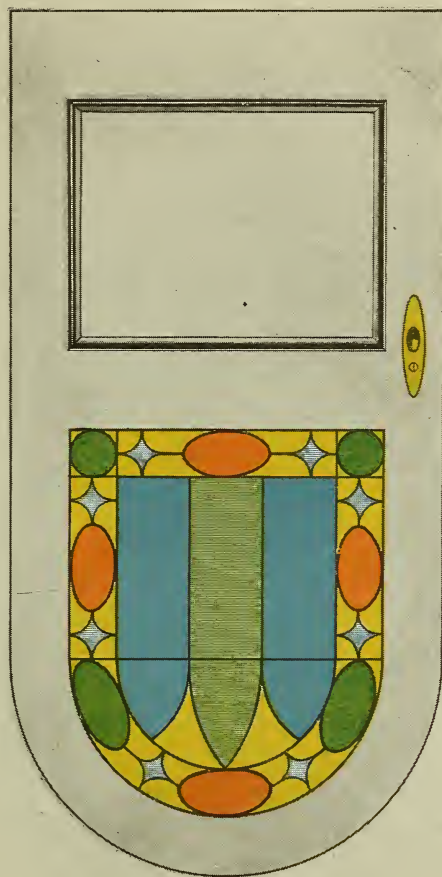


Steel

COURSE IN TINTING
PLATE III
CENTRAL INSTITUTE

REVISED 1907

PLATE III FINISHED.

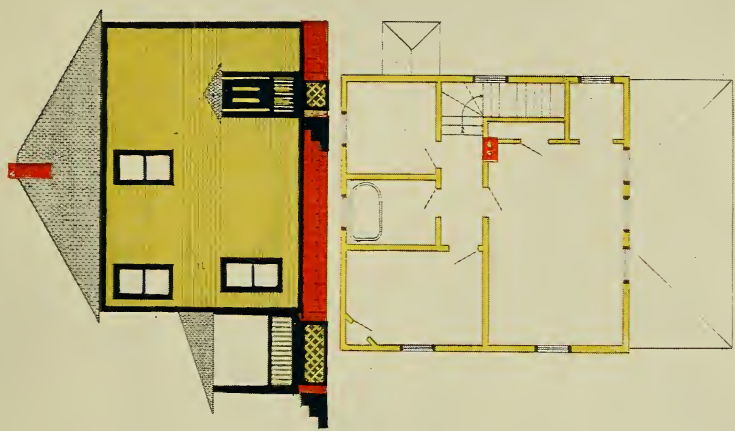


COURSE IN TINTING

PLATE IV

CENTRAL INSTITUTE - AMBOWILIER, NJ

PLATE IV FINISHED.

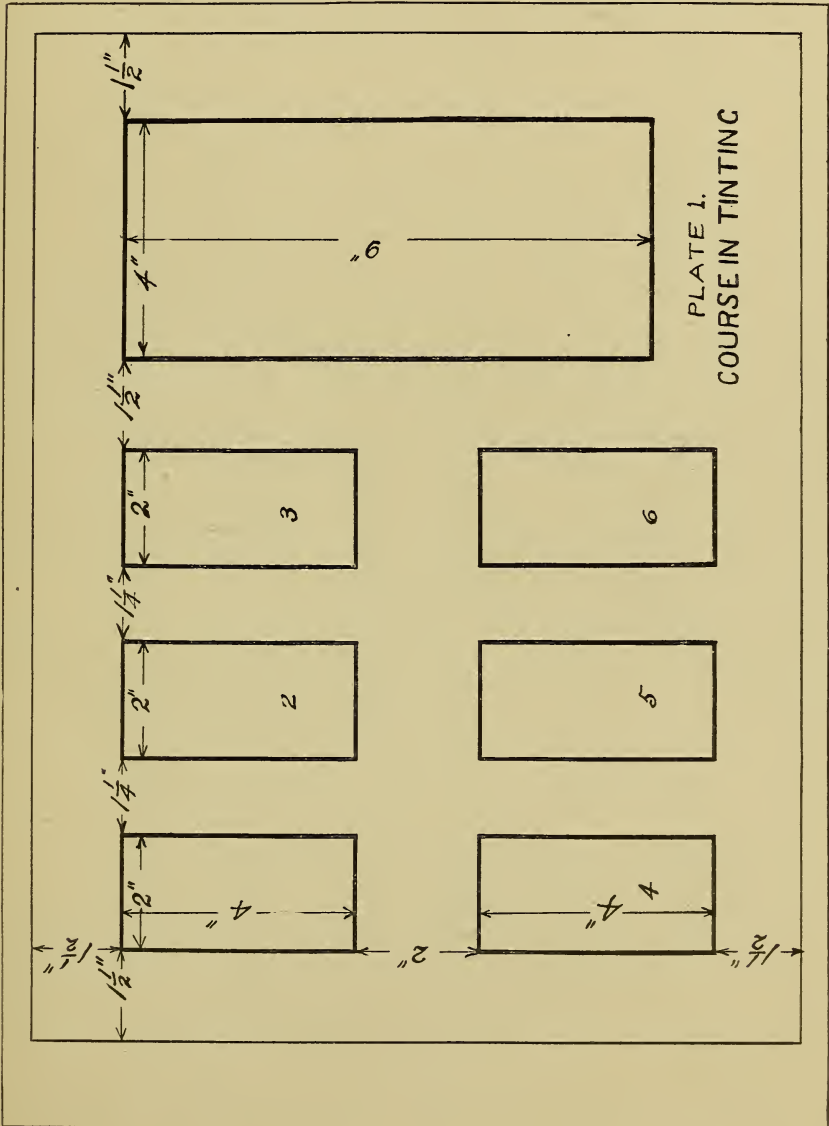


COURSE IN TINTING
 PART I. MONOCHROME
 CENTRAL INSTITUTE

PLATE V FINISHED.

In following a line with the brush, get in such a position that the forearm will be perpendicular to the direction of the line. Do not paint the shades on but allow them to flow quite freely after the brush.

In shading or tinting, there is great danger of making clouded places and "water lines" unless the greatest of care is taken in using the brush. If the brush is used over a shade that is partly dry it will



make it clouded. If the edge of the shade is allowed to dry before finishing, a "water line" is produced where the new shade is joined to the old.

In finishing up a figure the wash should be taken up with the brush so that it will not spread beyond the lines. Then wipe the brush on a cloth and take up some more of the wash. The sun should never be allowed to shine on the paper, as it will dry it too fast. A damp day for tinting or shading is better than a dry one for the reason that the drying is then very slow. Commence on No. 1 and while it is drying, put a coat on No. 2. To determine when a shade is dry, look at it very obliquely, and if it does not glisten it is ready for another coat.

The small rectangle No. 1 is to have one light coat of India ink wash; No. 2. two coats; No. 3. three coats. Make the first coats very thin, so that they will barely show on the paper when dry. Let each coat dry before putting on another.

BLENDING.

A varying shade, such as is noticed in viewing a cylindrical object, may be obtained by blending with India ink. This operation of blending is employed in bringing out the forms of objects as seen in the figures of Plate II.

The figures 4 and 5, Plate I, are for practice in blending before ap-

plying to the solid object. Begin No. 4. by laying on a flat shade about $\frac{1}{4}$ inch wide, using but little ink; and when nearly dry, take the other end of the brush, slightly moistened in clean water, and run it along the lower edge of the shade blending downward. When this is entirely dry, lay on another plain shade a little wider than the first, and blend it downward in the same way, but extending it a little farther. Use but little water and lay on the shade in strips, always commencing at the top line. When finished the lower part will have had but one coat while the upper part will have had several. Blend 5 in the same way as 4, but use narrower strips of yellow tint in order to make more contrast between the top and bottom.

No. 6 is to be blended from red at the top to blue at the bottom. Turn the board around for the work.

The large rectangle is to shade from five coats of India ink at the top to white at the bottom.

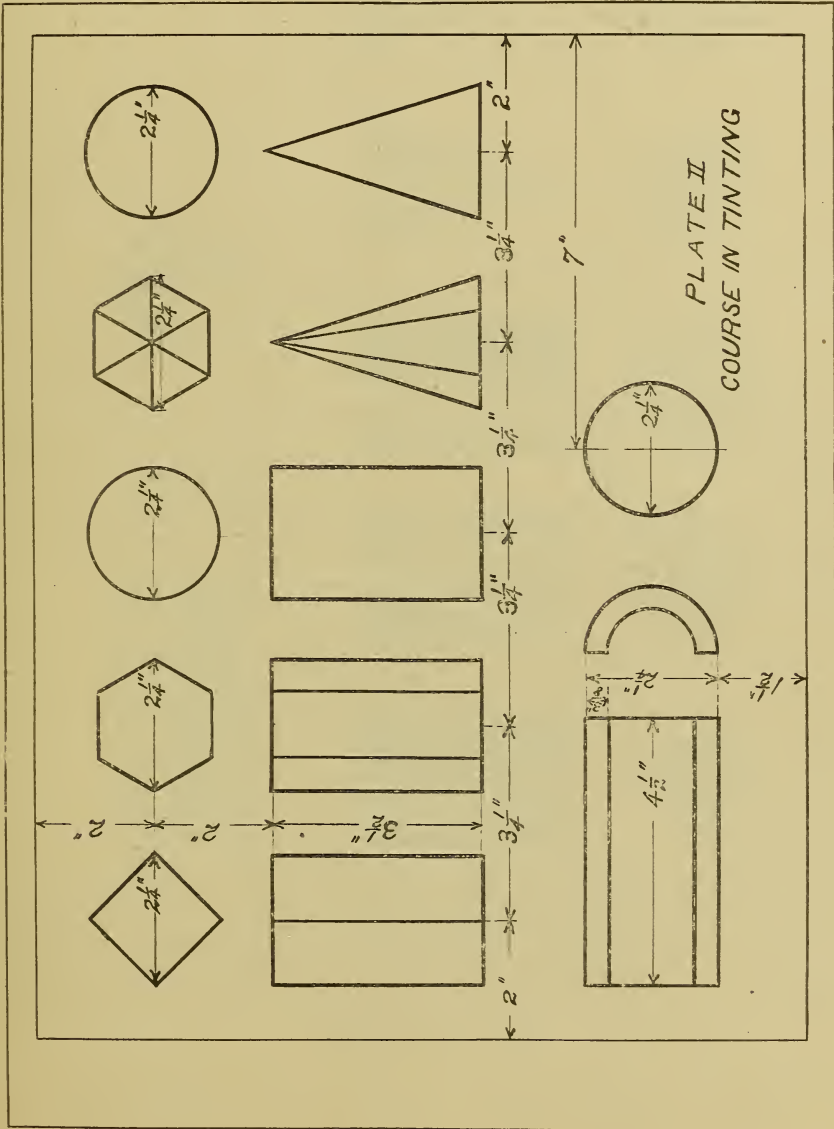
PLATE II.

SHADING SOLIDS.

When a solid object is placed in a strong light coming principally from one direction, a contrast will be noticed between the shades of the different portions, and these shades serve to reveal the shape of the object much more clearly

than when placed in diffused light only. For this reason, as well as from the fact that the laws of the shades of an object in light from one direction are very simple, the shades in a drawing are usually

made to correspond to those of a body where the light comes from a single window. In all cases, however, it is assumed that there is a certain amount of diffused light, such as is always present in a room



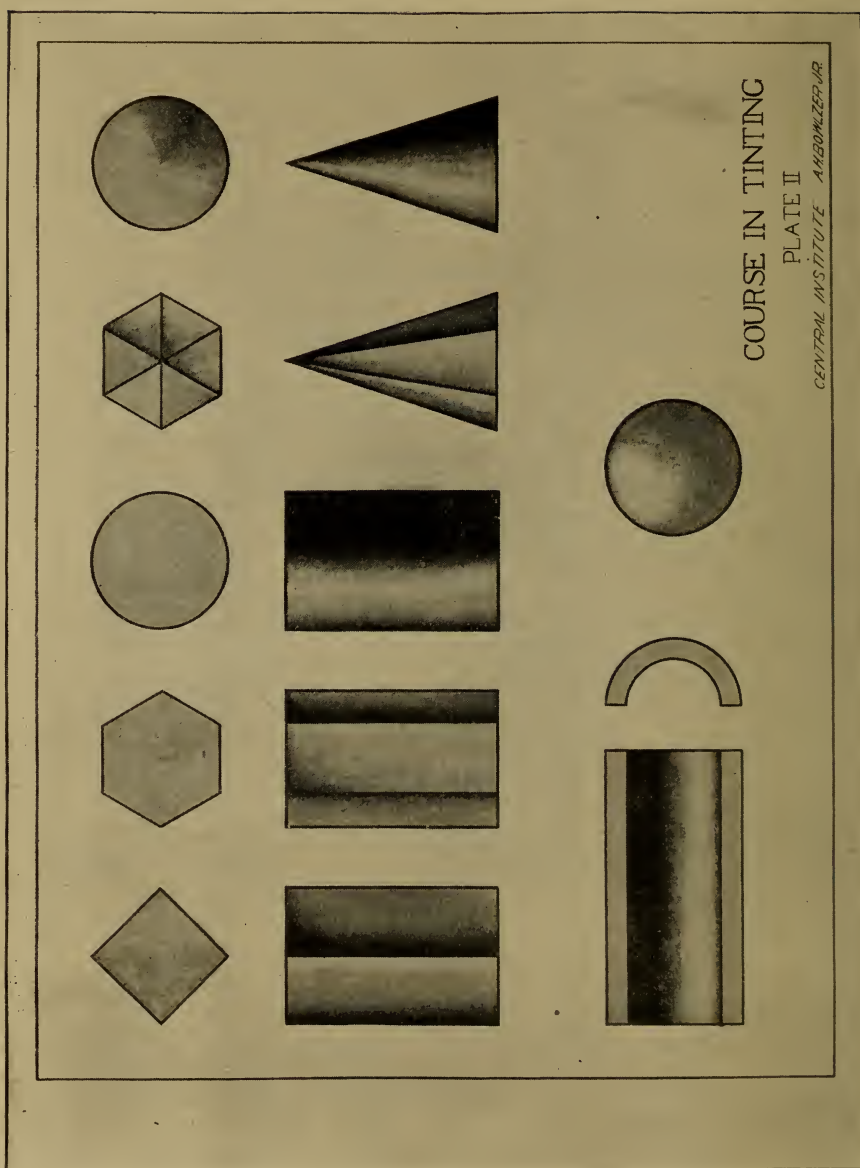


Plate II Finished.

lighted by a single window, aside from the strong beam of light that comes directly through the window.

1. The shades of an object are always in greater contrast when the object is near the eye than far away.

2. The lightest portion of a cylinder, cone or sphere is where the direct light strikes the object perpendicularly, and the darkest portion of the same is where the light strikes tangent to the object, the shade varying gradually between these parts.

The facts just given may easily be proved by holding a body in the light and noticing the shades.

These facts we will assume as the principles that govern the shading of the following objects.

In view of the above principles the first thing to be determined, after assuming the direction of the light, is where the lightest and darkest parts will be and what parts are near to the observer and what parts are the farthest away. In all the following cases, we will assume the light to come from over the left shoulder, make the angle forty-five degrees with both the vertical and horizontal planes of projection.

The same remarks about distance of object to border line may be made of this plate as for Plate I. A very thin wash may be put on all objects of the plate.

The top views of the first three

objects from the left should be the same shade and of about three coats. Turn the board so to work the blending as in Plate I for the flat and cylindrical surfaces.

The lower right hand object is intended for a sphere and should be shaded about as shown. No doubt the student will observe from Plate II the proper shading. Endeavor to improve on these illustrations.

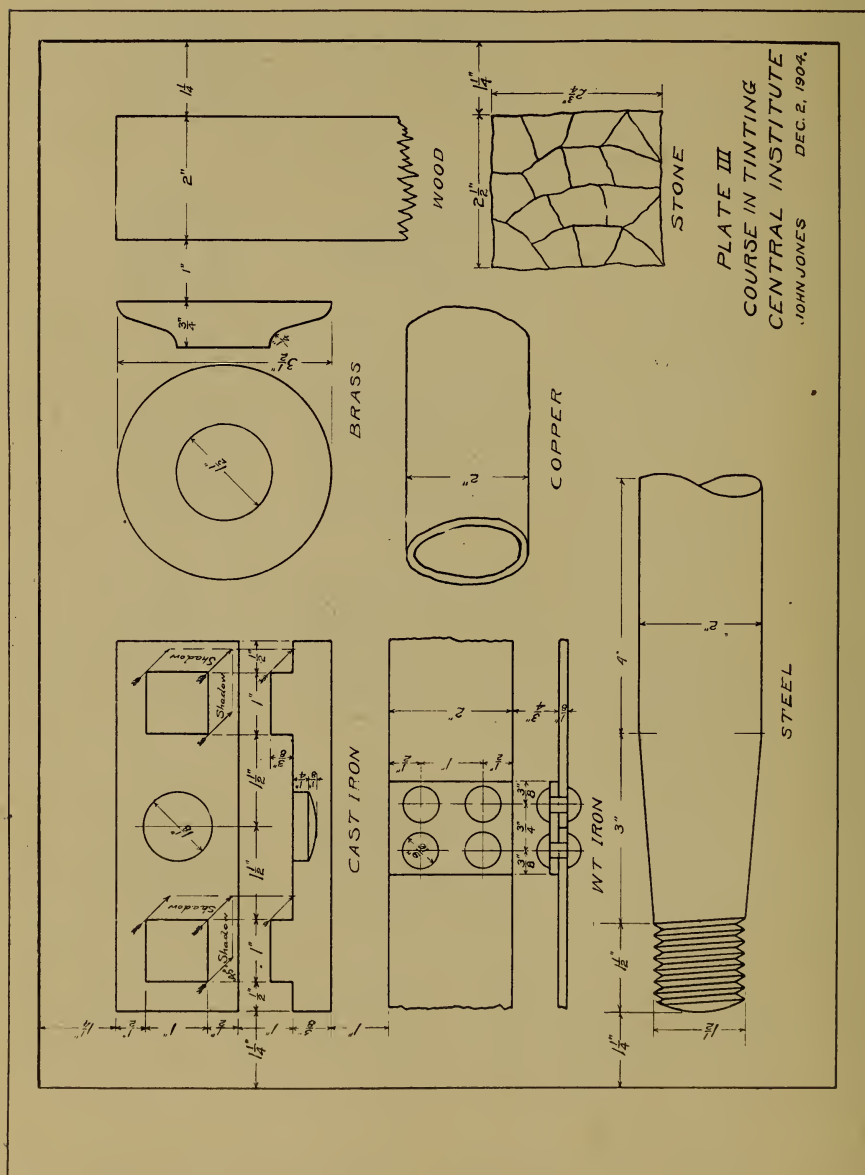
PLATE III.

Plate III contains the conventional tints for the following materials: Cast iron, wrought iron, steel, brass, copper, brick, stone and wood. These colors are more difficult to lay on evenly than the India ink shades, but what has been said about the application of ink shades applies to them. Great pains must be taken to have the paper in good condition and to keep the colors well mixed. Enough color should be mixed to finish the figure as it is almost impossible to match the colors exactly. Wash the brush thoroughly before commencing a new figure. Below are given the materials to be used in each convention, the exact proportions of these can best be found by experiment, comparing the colors with those on the plate. A number of thin coats, well laid on, generally look more even than when the tints are laid on in single coats.

For cast iron, use India ink, Prussian Blue and Crimson Lake;

for wrought iron, Prussian Blue and India ink; for steel, Prussian Blue; for brass, Gamboge, Burnt Umber and Crimson Lake; for copper, Crimson Lake and Burnt Umber;

for brick, Indian Red; for stone, India ink and Prussian Blue; for wood, Raw and Burnt Sienna. The convention for the body of wood is made by laying on a light coat of



Raw Sienna and the grain is made by applying the Burnt Sienna after the first is dry with the point of the brush, blending slightly in one direction. Other combinations requiring different colors are often used, but as they are conventional, the above will serve as an illustration.

haps 3-16 inch to the foot would be about right.

The walls will be 6 inches thick or 3-32 inch on the scale.

Draw the plans first and then the elevations to suit, the rough dimensions are the sizes to be used on the

PLATE IV.

Lay out the border of the plate as shown in Fig. 5 and then draw out a design for a stained glass church window, a door, or a hearth, then color the glass or tile appropriately with water colors, using black drawing ink for the lead joints between the pieces of glass or tile.

One illustration is of a door and the dimensions of it are given in Fig. 6, and it should be made full size of these figures. *No figures are to go on the sheet.*

PLATE V.

Draw the front and side elevation of a house, showing colors of the painting proposed; also two floor plans colored with the proper technical colors, brick chimneys and walls red, wooden walls yellow, floors white.

The dimensions for the floor plans should be taken from Fig. 7, using such a scale that will permit the plans to go on nicely, per-

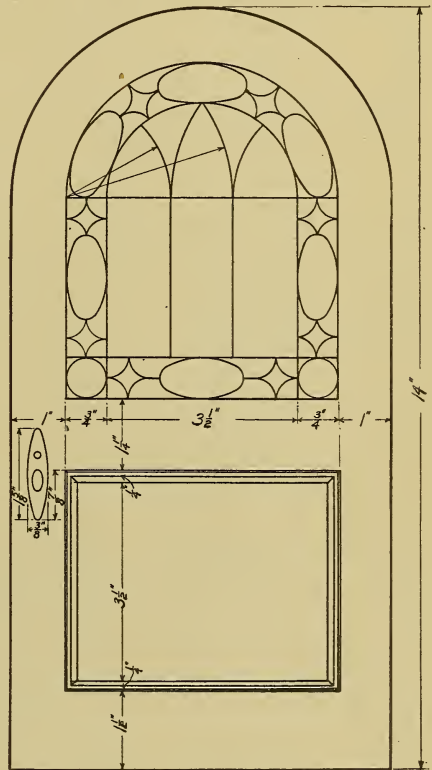
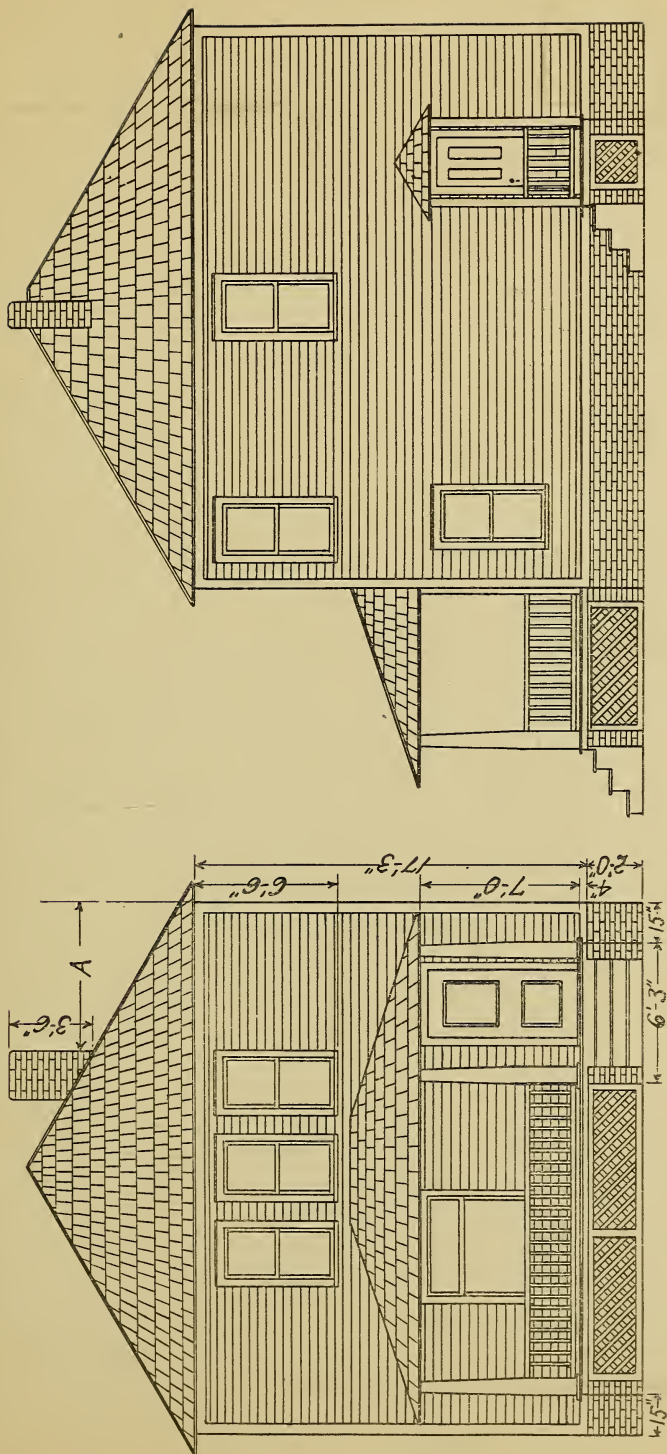


Fig. 6.

drawing but only where there is none from the plan that will determine the distance. The distance "A" should be found from the plans.

The side elevations of the house show brick walls, each brick 2 x 8



for the long view, and 2 x 4 for the end view.

The dimensions of a window are here given and the student should note the weather boarding to be $4\frac{1}{2}$ inches wide. The corner boards and base boards are each $4\frac{1}{2}$ inches wide, too.

CONCLUSION.

It might be said that there are an endless variety of examples all about us, from which the student can secure material for several other plates.

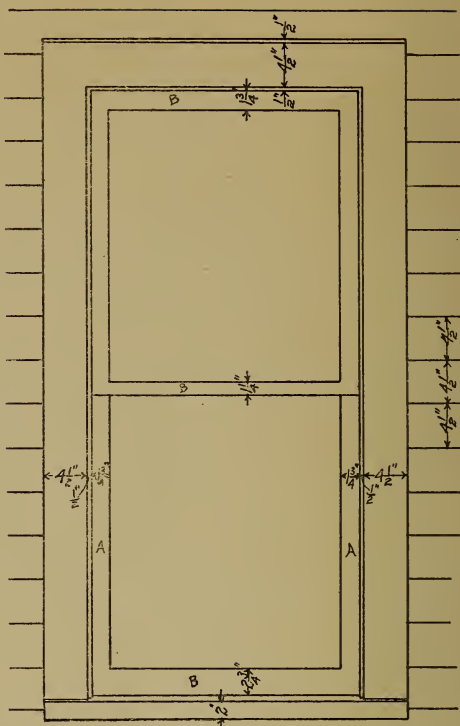
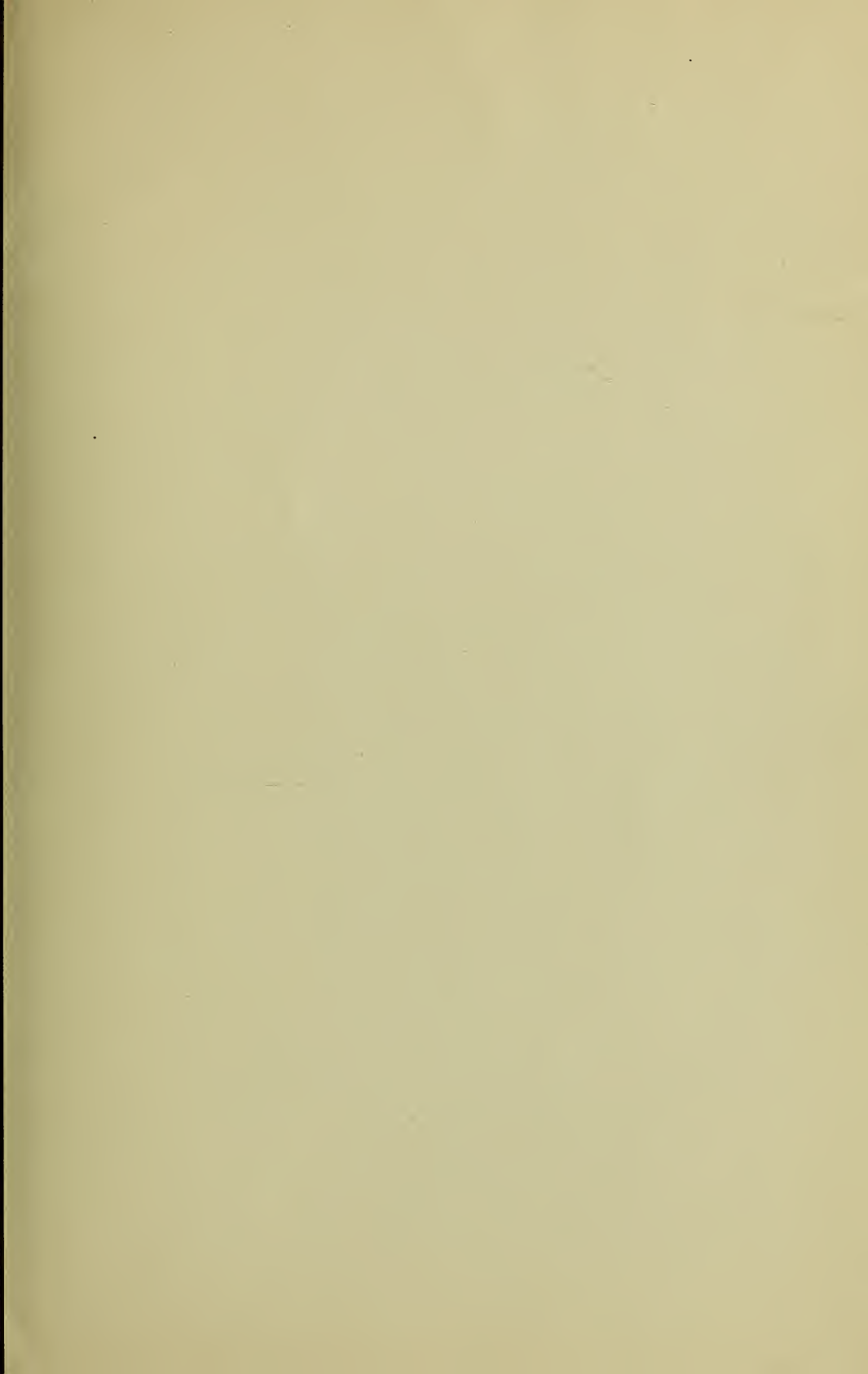


Fig. 7.



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